Fetal Adrenal Hemorrhage with Prolonged Pregnancy: A Case Report

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Fetal adrenal hemorrhage is a very rare clinical condition during pregnancy. There is limited data about this subject in antepartum period. With the widespread use of the obstetrical ultrasound, detection of fetal abdominal masses has become more common. In this case report we presented a case of pregnant woman (41w6d) with a fetus who had intraabdominal mass at right adrenal region.

Keywords: Fetal adrenal mass, Adrenal hemorrhage, Prenatal ultrasonography, Prolonged pregnancy

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Introduction

In recent years, with routinely use of obstetrical ultrasound examination, screening of the fetus was more reliable and provided important data about fetal development.[1] Renal masses constitute the majority of abdominal masses in literature. Among these renal masses, fetal adrenal hemorrhage (FAH) is difficult to be diagnosed because may misdiagnosed as cystic, complex cystic, and solid mass.[2,3] In a previous report in 1970's DeSa reported the incidence of adrenal hemorrhages based on extensive necropsy as about 1.7 per 1000 births.[4] Most of the adrenal masses detected prenatally are congenital neuroblastomas and adrenal hemorrhages (AH).[5] The etiological factors causing AH includes; fetal thrombocytopenia or coagulopathy in prenatal period and sepsis, renal vein trombosis, asphyxia, bleeding disorders pretermbirth, maternal autoimmune disease or dystocia in neonatal period.[6]

In current report, we presented our case of FAH detected incidentally during the prenatal follow up of a pregnant woman.

Case Report

A 30-year-old primigravid (G1P0) applied to our emergency service with lower abdominal pain. On her pelvic examination no cervical dilatation or effacement had been determined. She had 41 weeks and 6 days of pregnancy according to her last menstrual period and hospitalized to our obstetrics clinic with prolonged pregnancy diagnosis. On the ultrasound examination of the fetus we detected a mass of 59 mm diameter in the right paravertebral suprarenal region that was centrally hyperechoic and septate, peripherally anechoic (Figure 1). The initial diagnose was FAH. After 48 hours of clinical follow up, the mass was the same. We induced the labor by vaginal dinoprostone and she delivered vaginally and gave a 3800 gr, male, 52 cm, 7-9 APGAR of fetus. In the examination of the newborn there was not any palpable abdominal mass and in the laboratory tests there were no abnormalities like anemia, increased tumor markers or catecholamine metabolites. In his follow up the ultrasonographic imagination of adrenal mass was disappeared at postnatal 6th month.

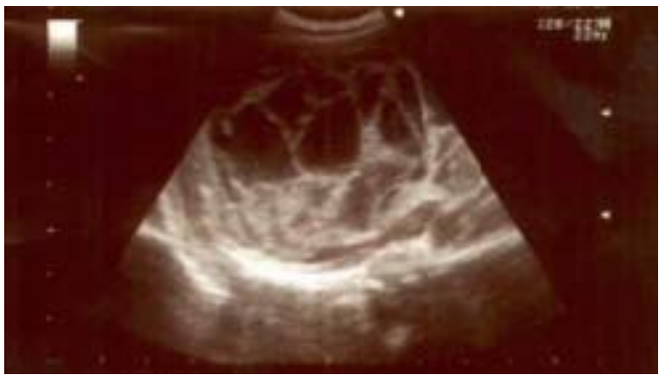

Figure 1: A mass of 59 mm diameter in the right paravertebral suprarenal region that was centrally hyperechoic and septate, peripherally anechoic

Discussion

In current study, we evaluated a case of FAH incidentally detected and delivered in our hospital. The woman had no previous antenatal follow up and we detected a suprarenal mass at fetal abdominal region incidentally on initial ultrasound examination. There was no problem in delivery. The first examination of the newborn was made by pediatrician and no prob-

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lems were noted. The newborn also followed up for the FAH and that adrenal mass was disappeared at postnatal 6th month.

FAH is a clinical condition that is relatively common in neonates, the incidence of FAH in antenatal period reported to be about 1.7 per 1000 births.[4,7] When occurred in utero it is generally seen on the right adrenal gland with a ratio of 70%, and bilaterality is reported as 10%. Possible mechanisms are the compression of the right adrenal gland between liver and spine and its connection to inferior vena cava directly.

Adrenal glands tend to bleed, because they are 20-fold greater than in adults and have a high degree of vascularity supplied by the inferior phrenic artery, abdominal aorta adrenal arteries. Adrenal bleeding is usually limited by the capsule, if excessive bleeding occurs there may be a torn in the capsule and the blood spread to the retroperitoneal region. The clinical manifestations of prenatal FAH are; jaundice, ischemia, palpable abdominal mass, and very rare symptoms of adrenal insufficiency.[7,8] Feared complication of adrenal hemorrhage is adrenal insufficiency. This condition is very rare, because %90 of adrenal gland must be damaged bilaterally. In our case FAH was on right adrenal gland like reported in the literature and also we had no clinical manifestations and newborn was normal.

The etiology of adrenal hemorrhage is still unclear. The etiological factors predisposing to FAH are fetal coagulopathy or thrombocytopenia in prenatal period, sepsis, asphyxia, renal vein thrombosis and other fetal and maternal conditions in newborn period. There are some views that fetal weight and tendency to bleeding of fetal vessels might be predisposition to adrenal hemorrhage in the literature. In contrast to these findings, our case delivered a fetus with normal weight and we determined no etiological factors and possibly it was essential. The regression and resorption of the mass or calcification on the lesion over time confirms the diagnosis generally, but a definitive diagnosis should be made by pathologically.

The differential diagnose of FAH should be made from neuroblastoma especially in unilateral hemorrhage. Neuroblastoma is defined as the malignancy derived from neuroblasts, usually seen in fetal and newborn period. It is reported that catecholamine metabolites in 24 hours urine should be measured to make the differential diagnose.[9]

Fetal adrenal gland has a key role in hormone biosynthesis and the resulting increased levels of estrogen and prostaglandins and decrease levels of progesterone initiate the labor. This process might be retarded by fetal adrenal hemorrhage. And our patient might be admitted to our hospital with prolonged pregnancy as a result of fetal adrenal hemorrhage. Our case delivered by normal vaginal birth and no complication noted in mother and newborn in postpartum period.

In conclusion fetal adrenal hemorrhage could be detected with no cause or risk factors in prenatal period and presented with prolonged pregnancy. They can be followed up closely and regularly by ultrasound examination and delivered by vaginally.

Uzamış Gebelikte Fetal Adrenal Hemoraji: Olgu Sunumu

Gebelik döneminde fetal adrenal hemoraji çok nadir görülen bir klinik durumdur. Literatürde antenatal süreçte bu konu ile ilgili kısıtlı veri mevcuttur. Obstetrik ultrasonun yaygın kullanımı ile fetal abdominal kitlelerin tespiti yaygınlaşmıştır. Bu olgu sunumunda sağ fetal adrenal bölgede kitlesi olan bir gebe kadının (41h6g) sunulması amaçlanmıştır.

Anahtar Kelimeler: Fetal adrenal kitle, Adrenal kanama, Prenatal ultrason, Postterm gebelik

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